

## **Exhibit 2**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant: James J. Fort, *et al.*

Serial No.: 09/709,829

Filed: November 10, 2000

For: SOLID DISPERSION  
PHARMACEUTICAL FORMULATIONS

Examiner: Jeffrey E. Russel

Group Art Unit: 1654

Confirmation No. 3590

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I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being electronically filed with U.S. Patent and Trademark Office on:

Date of Deposit: February 19, 2007

<u>/Kim Gleason/</u>	<u>2/19/07</u>
Kim Gleason	Date

**DECLARATION OF DEVALINA LAW**

1. I am Devalina Law, Ph.D., resident of Libertyville, Illinois. I am employed by Abbott Laboratories as Associate Research Fellow. I received my Ph.D. in 1994 from University of Minnesota. I have worked in the pharmaceutical sciences for approximately 12 years primarily in the analytical area supporting drug discovery and formulation development. This area determines such properties as polymorphism effects, solubility of drug in formulation and drug product stability. I helped redesign ritonavir formulations to enhance the solubility and dissolution rate of ritonavir. A copy of my curriculum vitae is attached herewith as Exhibit 3.

2. I have read U.S. Patent No. 5,610,193 (hereinafter the '193 patent). I am familiar with the invention described in the '193 patent. The patent features solid pharmaceutical compositions which include at least one pharmaceutically acceptable adsorbent to which is adsorbed a mixture of a pharmaceutically acceptable organic solvent(s), an HIV protease inhibitor and a pharmaceutically acceptable acid(s).

3. Example 4 of the '193 patent describes a reference composition which includes 50.0% PEG 1450, 33.0% ritonavir (i.e., compound III), 8.3% anhydrous citric acid, 8.3% malonic acid, and 0.4% lactose monohydrate.

4. Examples 17, 20, and 22 of the '193 patent describe how ritonavir was prepared in that patent. In Example 17, ritonavir was prepared by concentrating the final reaction solution in vacuo followed by silica gel chromatography. See column 18, lines 48-67, of the '193 patent. This process produces crystalline ritonavir. See column 31, lines 39-63, of U.S. Patent No. 5,541,206 (Exhibit 4); and column 1, lines 39-43, of U.S. Patent No. 6,894,171 (Exhibit 5). In Example 20, ritonavir was prepared via crystallization from an ethyl acetate/hexane solution. See column 23, lines 7-10, of the '193 patent. In Example 22, ritonavir was

prepared via crystallization from an ethyl acetate/heptane solution. See column 24, lines 49-55, of the '193 patent. Based on the methods described in Examples 17, 20 or 22, I believe that ritonavir used in Example 4 of the '193 patent should also be crystalline ritonavir.

5. Solid crystalline ritonavir is practically insoluble in molten PEG 1450. Therefore, ritonavir in the composition of Example 4 is likely to remain in the crystalline form.

6. In column 29, the '193 patent describes that the composition of Example 4 has only 4.2% bioavailability. In contrast, a solid dispersion of amorphous ritonavir in PEG has been shown to have markedly improved bioavailability as compared to neat drug. See Figure 2 of U.S. Patent Application No. 09/709,829. Accordingly, the composition of Example 4 is not likely to be a solid dispersion of amorphous ritonavir in PEG.

7. All statements made herein of my own knowledge are true and all statements made upon information and belief are believed to be true.

Devalina Law

Devalina Law

2-15-07

Date

ACKNOWLEDGMENT

State of ILLINOIS }

ss:

County of LAKE }

On the 15 day of February 2007, before me, personally appeared Devalina Law, proved to me through satisfactory evidence of identity which was Abbott I. A. to be the person whose name is signed on the preceding or attached document, and acknowledged that he/she executed the same, of his/her own free will and for the purposes set forth.

Marilyn Irizarry  
Notary Public

